

Australian Natural History Medallion 2010

Donald PA Sands OAM



Dr Don Sands is presented with the Australian Natural History Medallion 2010, by Professor Lynne Selwood, President of the Royal Society of Victoria. (Photo by Joan Broadberry).

The winner of the 2010 Australian Natural History Medallion is Dr Donald PA Sands OAM, an Honorary Research Fellow with CSIRO Entomology in Brisbane. Although Don retired in 1997, following a career that spanned 30 years as an entomologist at CSIRO, he has continued to be actively involved in a number of major projects that focus on insect conservation. These projects include ecological studies on the natural history of insects and their food plants, and their interactions. This work often takes place within the context of involvement with local community groups.

Since 2004 Don has visited the United States regularly and participated in several biological control projects with staff from the US Department of Agriculture. These natural history

projects have included: feasibility studies for controlling American fruit flies with Australian parasitoids associated with the family Oleaceae; surveys of insect herbivores of *Lygodium* ferns (mainly *L. microphyllum*) on Cape York, northern Queensland, Papua New Guinea, Northern Territory and northern Western Australia; development of methods for rearing and testing for European insect herbivores of an invasive weed, giant grass *Arundo*; and the development of new methods to rear a diaspid scale insect and a gall-forming wasp, for use against the target weed. Don's contributions to the rearing of a diaspid scale insect have been acknowledged as saving more than a million dollars in the US.

Dr Sands has a long-standing interest in fire ecology, which has led to his measuring the

impacts of fire on insect biodiversity, initially in New South Wales and then in Papua New Guinea, during a period with the PNG Department of Agriculture, Stock and Fisheries. This focus was continued in Brisbane, where Don monitored the butterflies of Mount Coot-tha for several years, observing major detrimental effects including loss of Lepidoptera species and plants from deliberately lit and 'controlled burns' conducted by the local Council. This work resulted in the publication in 2005 of an advisory document on fire management (a 'Fire Code'), which Don co-authored.

Between 2007 and 2009 Don presented a series of invited lectures in Queensland, NSW and Victoria, on insects and fire ecology. He was an invited participant in the Queensland reviews of threatened species, in the 'Back on Track' seminars and a member of the Conservation Committee (2003-2009). His views were presented also at an insect/fire workshop in Victoria in 2009, which was sponsored by DPI and La Trobe University.

Don's dedication to public education and involvement in natural history studies is evident in his own commitment in these areas. He was a founding member of The Hut Environmental & Community Association (THECA) at Chapel Hill in Queensland, which has sponsored a series of biennial community workshops on a range of environmental topics. Don has assisted in the organizing of these workshops, provided presentations, and published articles in the THECA newsletter. He is also a member of the Moggill Creek Catchment Group and has participated in their habitat and plant nursery activities.

Dr Sands is a regular speaker to a range of natural history groups, including natural history societies, garden clubs, native plant societies and entomological societies. In the past 10 years he has given numerous presentations, including public talks and PowerPoint presentations at environmental events, where he emphasized the importance of the identities and ecology of insects in implementing all conservation programs. Don has also led exploratory and natural history expeditions to places of interest for studying Lepidoptera, including Iron Range (several visits including 2007); Cape York Peninsula (2005); and Flinders Ranges, South Australia (2006).

He is no less committed in his written output for both scholarly and popular audiences. His published work comprises more than 120 refereed articles, books and chapters, of which about 27 have been published within the past 10 years. These more recent papers have concentrated on the natural enemies of insects and weeds, methods for safety testing agents as biological control agents, and taxonomic and insect conservation projects. In the same period, Don has also authored a further 15 popular articles on these subjects, published in newsletters and community publications. These works include *Conservation of Birdwing Butterflies*, published in 2002, which Don edited with Sue Scott.

Don's work on the conservation of the Richmond Birdwing butterfly began in the 1990s, as a conservation endeavour involving schoolchildren. This project enjoyed some success; in 2005 heightened awareness and requests from the community induced Don and Sue to form a new Group, the Richmond Birdwing Recovery Network Inc. (RBRN) involving members of the community in recovery of the butterfly and its rare food plant. Between 2005 and 2009, RBRN grew to have more than 400 members and promoted a number of measures aimed at conserving the iconic butterfly species. These included planting food plant vines to re-establish corridors for the butterfly; studies on in-breeding depression occurring in fragmented habitats; propagation by nurseries of the rare food plant for habitat rehabilitation; and education programs. Don served as President of RBRN until mid 2009.

Don Sands was nominated for the Australian Natural History Medallion by the Australian Entomological Society for his contribution to biodiversity, conservation and education.

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